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REMARKS/ARGUMENTS

Claims 1, 2, 3 and 4 and claims 11 - 14 remain in the application.

Claims 5 - 8 have been cancelled without prejudice. Claims 9 and 10 were previously cancelled.

The rejection of claims 1 and 11 under 35 U.S.C. 102(b) as being anticipated by Balazy et al (US 6,152,162) (hereinafter Balazy), and the rejection of claims 2 and 12 under 35 U.S.C. 103(a) as being unpatentable over Balazy as applied to claims 1 and 9 [11], further in view of Doty et al (US 2001/0032668 A1) (hereinafter Doty), and the rejection of claims 3 and 13 under 35 U.S.C. 103(a) as being unpatentable over Balazy as applied to claims 1 and 11, and further in view of Lowery et al (US 6,564,824) (hereinafter Lowery), and the rejection of claims 4 and 14 under 35 U.S.C. 103(a) as being unpatentable over the combination of Balazy, Doty, further in view of Lowery are respectfully traversed. Reconsideration is respectfully requested.

In Paragraph 9 of the Office Action entitled "Response to Arguments," the Examiner contends:

Applicant's arguments filed 02/22/2006 have been fully considered but they are not persuasive. Applicant's argument that Balazy does not disclose, or even suggest, a valve in the flow path that controls the flow by pulsating the valve at a controlled frequency to obtain a preset target Pressure is unpersuasive in that the claim does not recite a "pulsating the valve at a controlled frequency". Also, the limitation in claim 1 reads, "a controller connected to receive said signal and pulse said valve at a frequency to obtain a preset target valve of Pressure". Clearly the recitation "pulse said valve at a frequency" is a functional limitation and the

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valve in Balazy et al. is capable of meeting this functional limitation in that it is moved to achieve a target pressure. In Col. 9, lines 56 - 60, Balazy et al. clearly states that the controller (405) "continuously adjusts (as required)" valve (420) "to insure that the actual flow through the system precisely corresponds to that desired". Thus Balazy et al. is capable of pulsing the valve at a frequency as claimed.

Although the Examiner continues to refer to Balazy's element 420 as a "valve", it is not a valve. Balazy characterizes it as a pressure regulator. In fact, in his Summary of the Invention, Balazy states:

The present invention features a method and system for controlling the rate of fluid, and particularly gas, flow which uses pressure regulation rather than a control valve. (Sentence bridging columns 1 and 2 of Balazy.) (Emphasis added.)

Thus, the Examiner's mischaracterization of Balazy's pressure regulator as a control valve is erroneous. Applicant's statement that "Balazy does not disclose, or even suggest, a valve in the flow path that controls the flow of pulsating the valve at a controlled frequency to obtain a preset target pressure" is completely accurate and fully supported by this statement from Balazy. The Balazy reference never characterizes its pressure regulator 420 as a valve. See column 8, last full paragraph reading as follows:

Pressure regulator module 403 includes a through flow passage 423 including an inlet flow passage portion 403-i communicating at its lower end with passage 402-i of module 402 and an outlet portion 403-o at the other end of the module. A pressure regulator 420 is mounted in inlet flow passage portion 403-i, and an upstream pressure sensor 414 is provided in passage 423 downstream of pressure regulator 420. (Emphasis added.)

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Again, in column 9, lines 25 and 26, Balazy refers to the pressure regulator 420 as "a signal to increase or decrease (as required) the pressure output by pressure regulator 420." Again, in the quote referred to by the Examiner, Balazy states:

Electronics module 405, in turn, continuously monitors the input date and continuously adjusts (as required) pressure regulator 420 to insure that the actual flow through the system precisely corresponds to that desired.

All this is in keeping with Balazy's earlier disclaimer of the control valve wherein he states: "controlling the rate of fluid, and particularly gas, flow which uses pressure regulation rather than a control valve."

Even if one deems, contrary to Balazy's statement, that the pressure regulator 420 is a control valve as contended by the Examiner, there is no teaching or suggestion in Balazy or any of the secondary references of pulsing the valve at a frequency to obtain a preset target value of pressure across the flow restrictor as defined in claim 1 or, a control valve in a flow path and that the control valve being capable of high frequency pulsed operation, and a controller connected to "pulse said valve at a frequency required to obtain a preset target value of pressure across said flow restrictor to control the flow rate of said fluid" as recited in claim 11.

Moreover, what Balazy is doing is controlling flow by controlling the pressure across a flow restrictor by adjusting one or more pressure regulators. Applicant is not. What applicant is doing is pulsating a valve and thereby producing a large number of

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discrete increments of fluid which, downstream of the valve, add up to give the desired flow. The more often it pulses, the more the flow. Applicant does not control the system (or downstream) pressure. If the upstream pressure is higher, each increment is larger and the valve pulses less frequently. The orifice in applicant's valve does not change size.

In Fig. 6, referred to by the Examiner, 420 is a pressure regulator, not a valve *per se*, as he states. It controls pressure, not flow. And it does it by using pressure feedback to adjust the size of a flow passage, to control pressure.

Applicant's valve directly controls the flow by having its opening frequency modulated by its flow measuring/electronic control system. The Examiner's interpolation of Balazy as being "capable" of performing the function "(i.e. pulse said valve at a frequency)" is entirely speculative.

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In view of the above, further and favorable reconsideration is respectfully requested.

Respectfully submitted,



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In the event this paper is deemed not timely filed, the applicant hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 26-0090 along with any other additional fees which may be required with respect to this paper.

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